tech that it hurts". (News-Star, Monroe, LA August 9, 1999). Moreover, that same report ranked Louisiana as follows:

- Only one in five adults have access to the Internet, putting Louisiana 47th nationally,
- Louisiana ranks 46th in the percentage of workers with college degrees or some college,
- Few private firms have ".com" Internet domain names.
- The state ranks 44th in commercial Internet sites per company. The vast majority of the firms in the state are not on the World Wide Web at all.

Abundant evidence indicates that rural low-income African-American households are extremely behind in home computer ownership and Internet connectivity. And what is equally clear is that the potential economic, social, health, family, and educational effects of not being included in the Information Age will almost certainly exacerbate an already critical situation.

Proposing a Credible Solution that Employs Network Technologies

The La RINC project proposes to partner with local black churches in each target parish. The church will attract and inform citizens of the technology diffusion project, provide a computer lab location in the church, a phone line, lab personnel (that GSU will train), and assist in data collection. After general training on the computer and the Internet, selected families that have received the training at the church lab will receive a computer and 36 months of Internet access placed in their home. These selected families will receive continual monitoring, assistance, additional training, GSU web page "first call" assistance for health, education, family, workforce development, community information, and technical support.

Why the black church? Why not community centers, local employers, or schools? Some general background on the rural south may be helpful. The social structure of the rural south, both White and African-American, is heavily influenced by the church, but it is even more pronounced for the African-American population. "The black church as an institution has always reached out to serve important functions for the black community as a whole. It is in this respect both preserver of the African-American heritage and an agent for reform. Indeed no successful movement for improving the conditions of life for the African-American people has been mounted without the support of the church…The black church is at the leading edge of the African-American community's push to influence the future of its families" (Billingsley, 1992). The principle reasons the schools are not well suited to increase technology awareness is transportation, hours, and they are not multigenerational. Transportation in the rural communities means many students ride school buses, thus, transportation to and from the school for extra-curricular activities such as working on a report, become impossible. Additionally, one of the goals of the La RINC project is to increase "other" uses of the Internet, such as, job searching, health information, etc., which are decidedly adult in nature. This rationale is intended to show that establishing a relationship with the African-American community in the rural south is best effected by enlisting the assistance of the black church.

Identifying Realistic, Measurable Outcomes

The La RINC project will strive to meet the following goals:

Objective 1: Improve household employment status.
Metric: (1) Train on job search access, (2) Access job boards (3) Self-report on job related activity, (4) Train someone else independently, (5) Access GSU web Workforce Development "first-call" job assistance.

Objective 2: Improve family knowledge of health factors.
Metric: (1) Train on health search access, (e.g., WebMD, etc.), (2) Access GSU web Health "first-call" assistance for areas such as exercise, nutrition, safety, pre-natal, etc.

Objective 3: Improve the quality and level of educational attainment and/or employability.
Metric: (1) Kindergarten through college use of Internet for searches, reports, projects, etc. (2) Train on job skill search process, (3) Access job skill training sources, (4) Access basic skills and/or GED preparation sources, (5) Access GSU web Public Schools "first-call information, (6) Access student "help" sites.

Objective 4: Improve family interactions.
Metric: (1) Train on family interaction sites, (2) Train others to use computer, (3) Play games involving two or more people, (4) E-mail friends and family, (5) Access GSU web Social Work department for help/information.

INNOVATION

The La RINC project is innovative in three major areas: (1) It targets a virtually non-served population in critical need of services, (2) It utilizes relatively uncommon technology, (3) It builds on previous projects and research.

First, the project is innovative because it targets the most unconnected group according to *Falling Through the Net II*, "The digital divide between racial groups in PC-ownership has increased since 1994…On-line access is also the lowest for Black households in rural areas (5.5%)." Both non-served populations – African-American and rural – who are in critical need of services, will be served.

Second, the project is innovative because it utilizes technology not commonly used, that is, satellite provided large bandwidth Internet access. Most Americans and companies are connected to the Internet via landlines, e.g. telephone, cable, or LAN connections. But connecting over a telephone line can be very costly for rural sites especially when large bandwidth is needed. The answer might be to download sufficient bandwidth from satellite. For example, TIIAP funded a project at University of Texas-Pan American (Project NETmobile: #95137, May 1998) which used satellite Internet downlinking with its mobile computer lab very successfully.

Third, the La RINC project draws heavily from Grambling State University CareerNET Center's Welfare-to-Work experience. The CareerNET Center has for nearly three years operated a six parish Welfare-to-Work grant and a U.S. Department of Labor's High-Risk Adult grant. During this three-year period it became clear that short-term relationships with the rural low-income African-American community are wholly unsatisfactory. Without long term intervention, changes in life style rarely become permanent. Additionally, the La RINC project will build upon the success of other projects like the Montana State University's Burns Telecommunications Center grant (#30-40-98086) that demonstrates how to develop the expertise of community leaders, students, teachers, economic development specialists and citizens in the use of information technology. This project provides Native Americans their first access to the Internet and other advanced information resources in their colleges. The La RINC project will take this a step further by providing this access in community churches by training the church leaders to be trainers and then by placing computers and Internet in the homes so that all family members have access at all times. The West Suburban Hospital Medical Center's Every Block A Village Online project (#17-60-98013) demonstrates Internet access to medical and safety information in homes of citizen leaders in Chicago's depressed west side area. The La RINC project will build on this and take it further by having the Internet in the homes of church members for more than health and safety related information. Another funded project, the Baltimore County Public Schools grant (#24-4096043) demonstrates electronic access to school information. The La RINC project includes parish school information on its GSU web page

"first-call" buttons. In summary, this project will build on several existing grant projects and place them directly in the targeted rural communities.

DIFFUSION POTENTIAL

Grambling State University as an Historically Black College & University is keenly aware of the need for minority institutions to share information. GSU, in addition to posting information relative to the project on its web page, plans to present La RINC project "good news and bad news" at conferences which are highly attended by minority institutions. The church organizations have regional and national newsletters and conferences. Thus, both higher education and black church communities will be apprised of the successes of the project and how to develop a project in their communities. Also, GSU will plan, organize, and deliver a satellite teleconference to HBCU's and other interested institutions and organizations. The focus will be on "how to" develop and implement a project aimed at increasing the number of Internet households in their communities using this model. The teleconference will take place during the last six months of the project. Other participants can participate by "calling in" to the teleconference via an 800-number.

The La RINC project is a sustainable model that can be replicated in many different settings. Existing computer labs in HUD housing projects, schools, libraries, community centers, etc., can set up the training program and train area family members who can then transfer their knowledge to use on their home computers. Many of the problems this grant addresses in the low-income rural areas are found throughout the United States. Increased home access is the key to Internet usage that will provide families with knowledge, information on accessing work-skill improvement, job openings, health information, e-commerce for people living in rural areas who do not have the available stores to obtain helpful products, pharmacy access, and educational research access for students or general information, etc.

PROJECT FEASIBILITY

Technical Approach

The specific approach utilized in the La RINC project contains three major technical components: (1) Five church-based networked computer labs with large bandwidth (4 megabit minimum) satellite Internet, (2) Fifty home-based computers with land-line (POTS) Internet connection, and (3) A specially designed and dedicated GSU web page.

Each church will operate a small networked computer lab for use by its members and the community. Each lab will consist of five networked computers, a server, a Model 7000 Helius Satellite Router, a networked color printer, NT software, satellite routing software, packaged software applications, and all cabling necessary to connect the system. The network will be connected via the router to a DirectPC receive dish and interface card. The router functions as a 56K modem that also connects to a regular POTS telephone line for return to the Internet Service Provider (ISP). Each computer workstation can access the Internet independently of the others. The web browser on each lab computer will be set to the GSU "project" web page which will function as a sort of hub where the participants can do searches, e-mails, contact key persons in each of the objective areas, e.g. Health, Employment, etc. or go anywhere the Internet can take

them. GSU staff will monitor participant Internet use both at the labs and at the homes by checking the Favorites list, the computer's History, and the actual "cookies" in each computer. The "cookies" reveal not only which web sites have been access and how often, but also when participants are accessing them.

It is important to note that the La RINC project is determined to utilize commercial vendors and readily available products and services as much as possible. Also, the home computer system with 36-months of Internet service that will be leased to families is a regularly advertised product, e.g. PeoplePC.Com. Moreover, any non-profit entity could perform the training and support functions that GSU does, that is, the project can be replicated by organizations other than colleges and universities.

Since the goal is to effect positive changes in households, the church computer lab is only a means to an end. It serves as "advertiser", training facility, and on going "user support group" for participants. Thus, as a particular family demonstrates a strong interest and has completed both training and several weeks of usage, it will be offered a home computer system (if the family meets the minor income criteria). The home computer will be a leased computer system that includes a color printer and 36-months of Internet access. The project will pay up-front the three year lease price (estimated to be under $1,200 which includes computer, monitor, printer, Internet access, and 36-months of “in-house” technical support). Since the project will be leasing the system, it will not become GSU property, but will remain with the participating family until the end of the lease at which time the family may renew the lease at its own expense. The key factors here are that under federal guidelines the leased computer system and service are considered “supplies” and thus are not owned by the governmental agencies involved. Thus, the family will have had three years to integrate the Internet into its lifestyle and budget for assuming complete financial responsibility. In this way, the problem encountered by the Florida Institute of Technology project (the removal of the equipment after six months) will be avoided. A major issue in any technology project is how to maintain a complex computer system. The project will use a three pronged approach: (1) GSU technical staff will install and maintain the church labs for the duration of the project (three years) and (2) standard equipment warranties will be utilized to replace any equipment found initially defective (first 12-months), and (3) the home computer lease includes telephone and “in home” technical support. The church labs will be equipment “loaned” to the churches and will be maintained by GSU technical staff handling technical problems initially and gradually “weaning” the home participants into using the vendor provided technical support which is part of the lease agreement. It is hoped that in this way an often felt “techno-phobia” will be lessened for the participants by having a familiar and “friendly” technician to call and/or contact on the GSU web site. Finally, the support function will be a combined effort of GSU technical personnel, GSU’s web page, and the church cadre as well as the participants themselves becoming a support group.

Applicant Qualifications

GSU has nearly a decade long track record of technology use. The GSU Distance Learning Program operates a closed-circuit campus cable channel, a community cable channel (Cox Cable), a KU-Ban satellite uplink, a digital-KU-C-band downlink, four compressed video rooms, and the Mobile Automated Learning Lab. The university operates a web page that can be viewed at www.gram.edu. The university also has a well-staffed Information Resource Center that

has a Technical Services Unit that performs routine and as-needed maintenance on computers and video equipment.

The GSU cadre consist of the following personnel (Resumes in Appendix C):

Dr. Ben Lowery, Director of Distance Learning
Margaret Lowery, Manager of the CareerNET Center
Lena Carr, Training Specialist & Project Coordinator
Mr. Charles Bloxom, Technical Services
Carolyn Wilson & Veronica Flanagan, Clerical Support
Others to be hired listed in Appendix with Resumes.
Internet Specialist
Telecommunications Engineer

As partners, each church will provide a cadre of volunteers who will be trained in computer literacy and lab management. They will also be the first line maintenance interface with GSU technical support personnel and any vendor provided technical support. It cannot be over emphasized the key role these individuals will play in the project. These individuals are crucial because they will know most of the participants and as such will be the main encouragers. As part of their duties, they will conduct an initial poll of the best days and times to open the lab so that it will be available for participants to use the Internet and become familiar with its potential for their lives. It is through the recommendations of the church cadre combined with user data that will determine which families receive the project-sponsored home computers with Internet access. They will denote countless hours of service to their church community to help raise the level of technical literacy and redress the "digital divide". It should also be noted that the church pastors and church elders will be intimately involved in the selecting of each church's cadre as well as the general day-to-day supervision and scheduling. It this way, the project becomes a church-community endeavor putting the university staff in the roles of coordinators, technical assistants, and community-related information providers via the GSU web page. Both the church and the university will be involved with the community insuring that the social, educational, and economic effects derived from the La RINC project do not wither over time.

Implementation & Timeline

The La RINC project will span three years to allow time for; development, set-up, equipment to be ordered, select/hire staff and student workers, design GSU web page, select church cadre, train church cadre, train interested families, collect internet usage data, select families for home computer system, order home computer systems, install home computer systems, plan teleconference, develop brochure to teleconference, mail brochures, deliver teleconference, collect internet usage data, and write annual report. (Timeline in Appendix D).

Privacy

The privacy of individuals will be rigorously protected. All surveys will be anonymous except those that involve in-depth interviews. All participants will be given a "project code number" and all data collection and reporting will be done under the code number. The actual identities will be known only to project personnel directors. All identity-related information/documents will be destroyed at the end of the project.

As a household is identified to receive a home-computer, they will be asked to sign an "Informed Consent" form. The consent form will indicate in "plain English" that GSU will be monitoring how and when the Internet is used by participants at both church and home computers. Moreover, they will be interviewed privately every six months in a structured interview to ascertain information on changes in the lives of the household members. For example, job changes, training, family difficulties (e.g. substance abuse, domestic problems, etc.), health changes including physician/clinic visits, contacts with schools, etc. The consent form will inform the participants that absolute confidentiality will be maintained and the information will only be used to better understand how the Internet affects people's lives. Finally, the consent form will be reviewed by the Board of Regents Attorney who is the attorney of record for GSU before being utilized in the project.

Sustainability

GSU will continue to have the project web page available that will allow the church/community and families to access information and individuals beyond the grant period. Moreover, individuals and community groups desiring access to the GSU project web page will be invited to do so thus extending the project's reach. Other church or civic groups may establish labs and avail themselves of GSU's services which are part of the public university's "service mission."

COMMUNITY INVOLVEMENT

The La RINC project is not a project in isolation. Rather it is another piece of an on-going relationship between the university and the rural parishes it serves. An initiative termed the "Workforce Development Initiative" has been in progress for nearly four years. The thrust of the effort is to halt the outward migration from the northeast parishes, retrain and up-skill the adult population, and assist the public schools in producing competent graduates. From the parish side, mayors from some of the larger communities, clergy, and interested businesses and non-profit organizations also participate; many are GSU alumni. Representatives of these groups have met at the university on numerous occasions to discuss various grant opportunities, current issues, and strategies for workforce and economic development. For example, as a result of a meeting in fall of 1999, a survey was conducted with most local employers. The survey was intended to determine the level of need for more technology-literate workers in area companies. The survey clearly indicated that in addition to basic skills training there was a strong need for more "computer literate" individuals among job applicants. As a result of the collaborative effort described above, GSU was recently awarded a U.S. Department of Commerce, Economic Development Administration grant to conduct Internet awareness and training with small businesses in twelve parishes in north Louisiana (Rural Mobile Internet Training project #08-79-03515).

Partnerships

Letters of commitments from six church communities is in Appendix E. Each church will donate a room for the computer lab, a designated telephone line, and staff the lab. Five churches will be in the grant while the sixth church will participate as an alternative. Some churches are also providing transportation for families.

Sustaining and Obtaining Community Involvement

The church community and the general parish community are very excited about the prospect of getting Internet "help" as evidenced by the letters of support. Everyone sees web addresses on television advertising and hears people talking about their e-mail, but this rural community segment of society does not have access. Once this project is in the community, the church and community leaders and the individuals in the project will sustain the involvement. GSU will continue to have the web page access for these communities to ask questions and receive help as long as it is used.

The La RINC project by itself will not, of course, solve Louisiana's and the rural south's problem, but it may present a viable approach that can begin to redress a low rate of technical literacy. This project will serve as a catalyst. For example, if each of the fifty participants who get a home computer share the concept of leasing a computer with Internet access for only $24.95 a month with no money down with their friends and neighbors, the impact could be tremendous. In rural communities with only a couple thousand people, an increase of thirty, forty, or fifty Internet connected homes could be significant. And the evidence is clear, the home setting which provides security, many hours of access time, and builds on the core of American society, namely the family, is the correct approach.

Support for End Users

The La RINC project design stresses "end user support" throughout the project. Training in the churches, individual training in the homes on their system, instruction and help with technical support both from GSU and vendors, e.g. PeoplePC, continued information sharing with church cadre and GSU, and the GSU web page "first-call" information and support system. Major effort has been placed on support and education of the individuals so that they are comfortable with the Internet and not afraid of the technology. However, it should be noted that changes in participants' lives will not be brought about by the Internet itself, but rather by the information and help the Internet makes available to them. As indicated elsewhere, rural, low-income families have severely limited opportunities to access vital information when compared to suburban middle-income households. Further, experience with Welfare-to-work participants indicates that access alone will not necessarily lead to better lives, rather it is the quality of the initial introduction coupled with on going friendly support that changes lives.

EVALUATION

In order for the enormous potential this project could have on how colleges, universities and church organizations, or other governmental and non-profit organizations conduct their outreach activities, the research data collection and evaluation must be done correctly. Therefore, even though some project personnel have research experience, outside experts will be engaged to design the instruments (initial survey and structured interviews) and collect and analyze the interview data.

Evaluation Questions

The La RINC project is both a demonstration project and a research project. Little is known about Internet usage habits of rural low-income African-Americans. Since little is known, base-line information is necessary. Therefore, the project will develop and administer an anonymous “pre-program” survey which will gather demographic data on church members (potential participants) such as, household income, ownership and use of computers and the Internet, etc. The questionnaire will seek computer experience, the type of Internet use (if any), how they expect to use the Internet, areas of interest, and who in the family will likely use the Internet.

Evaluation Strategy

The evaluation plan will track the project objectives. Specifically, the evaluation program will measure to what degree individuals in the program gained information that made a difference in their lives. Every six months, a key member of each household will be interviewed to determine "changes" in the household. Specifically, the interviewers will be probing for changes (positive and negative) related to the four objective areas. The actual Internet use patterns derived from the computer "cookies" and "hit" rate on the GSU web page will be compared to the "family changes" data derived from the structured interviews to illicit relationships between type and amount of Internet use and the changes occurring in families' daily lives. At the end of the project, a summative satisfaction survey will be conducted with all participants (all adult household members), church cadre, and pastors to determine how the project could be improved.

Data Collection & Analyses

Internet-use data will be collected remotely, categorized, and analyzed. Data on the normal lives of members of the participating households will be conducted using a repeated-measures approach by interviewers. This data will then be categorized as being related to which a particular objective.

Specific analyses will be conducted to establish relationships between various family activities and/or changes and any discernable Internet usage patterns. Actual causality is not expected due to the lack of control groups, however, so little is known of the actual "real life" effects of long-term Internet use by rural, low-income African-Americans that a controlled study is not yet warranted. In other words, clear relationships between the "power of the Internet" and selected activities in people's daily lives must be established first.

Evaluator(s)

The external independent evaluator is Behavioral Analysis, L.L.C of Shreveport, Louisiana. Sandra W. Long, Ph.D. and Thomas P. Springer, Ph.D. and their staff will conduct the external evaluation. See resumes in Appendix C.